

CLAIMS

1. Surgical apparatus for conveying a fluid to a remote surgical site, comprising:
- an elongated cannula having a lumen therein extending between distal and proximal ends thereof;
- a fluid nozzle in fluid communication with a distal end of a hollow tube that is disposed within the lumen in substantially fluid-tight engagement therewith for translational movement therein near the distal end of the cannula to convey fluid through the lumen and tube and nozzle at a location selectively remote from the distal end of the cannula.
2. Surgical apparatus as in claim 1 including a support element attached to the nozzle and extending within the cannula to near the proximal end thereof to facilitate manual extension and retraction of the nozzle relative to the distal end of the cannula in response to manual movement of the support element from near the proximal end of the cannula.
3. Surgical apparatus as in claim 1 including a fluid inlet communicating with the lumen near the proximal end of the cannula for supplying fluid thereto from a source of fluid connectable to the fluid inlet.

4. Surgical apparatus as in claim 1 in which the hollow tube includes a segment of semi-rigid plastic tubing that is slip-fitted within the lumen near the distal end of the cannula.

5. Surgical apparatus of claim 2 in which the cannula includes another lumen therein that extends between the distal and proximal ends of the cannula to house the support element in sliding relationship therein.

6. Surgical apparatus as in claim 3 in which the fluid inlet is connectable to a source of liquid under pressure.

7. Surgical apparatus as in claim 6 in which the nozzle is selectively positionable relative to the distal end of the conduit to deliver liquid under pressure to a selected location.

8. Surgical apparatus as in claim 1 in which the elongated cannula includes a channel therein extending between distal and proximal ends thereof for receiving an endoscope therein; and the nozzle is disposed at the distal end of the cannula for delivering fluid to an optical element of an endoscope housed in the channel near the distal end of the cannula.

9. Surgical apparatus as in claim 1 in which the nozzle is positioned distal to the optical element of the endoscope directing fluid toward the optical element.

10. A method for delivering fluid to a remote surgical site using an elongated cannula including a slidable support for a fluid nozzle that is selectively extendable from a distal end of the cannula, the method comprising:

forming an incision at a selected surgical site;

advancing the elongated cannula through the incision toward a surgical location;

selectively extending the slidable support to position the nozzle supported thereon remote from the distal end of the cannula; and

supplying fluid under pressure through the cannula and nozzle at the remote position.

11. The method of claim 10 in which the nozzle is attached to a support element slidably supported within the cannula and extending to near a proximal end thereof, the method comprising:

selectively positioning the nozzle remote from the distal end of the cannula near the surgical location in response to manual sliding manipulation of the support element near the proximal end of the cannula.

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